



# PREVALENCE OF DYSLIPIDEMIA AND OTHER CARDIOVASCULAR RISK FACTORS (HYPERTENSION AND DIABETES) IN MEDICAL PROFESSIONALS

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## ABSTRACT

The strong epidemiological relationship between specific lipoprotein levels (such as elevated low-density lipoprotein, cholesterol or decreased high density lipoprotein cholesterol) and the future development of coronary heart disease is well documented. Within the past several years landmark clinical trials have clearly demonstrated that the incidence of coronary heart disease events is reduced when lipoprotein abnormalities are corrected via pharmacological therapy. These findings have promoted clinicians to become more vigilant with regard to dyslipidemias and institution of treatment. The same is true of diabetes mellitus and hypertension which are also risk factors for coronary artery disease.

## MATERIALS AND METHODS:

Study was done in Govt. medical college in jamnagar on medical professionals. The medical professionals consisted of doctors (both faculty and residents) and nurses.

Sampling size 136

**Type of study:** Non randomized cross sectional study

They were divided according to age groups namely:

25-34 years -97

35-44 years -18

45-54 years -16

55-64 years -5

Total -136

## METHOD:

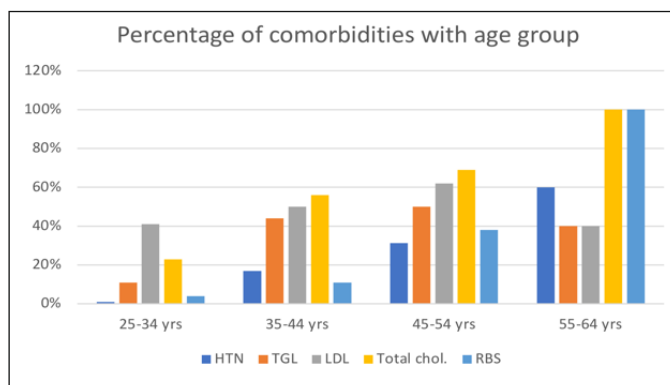
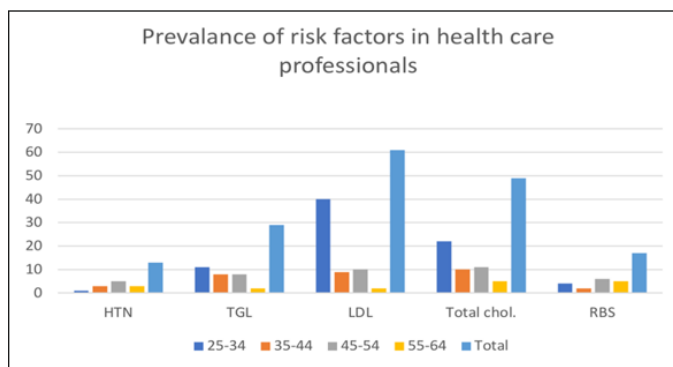
Blood pressure was checked for all of them

A sample of blood was taken to check RBS and lipid profile consisting of total cholesterol, triglyceride, LDL, HDL(C). Of the doctors, faculty members numbered 45, residents numbered 85 and nurses numbered 6.

## OBSERVATIONS:

This table shows the number of those tested which showed abnormal results

Age group	HTN	TGL	LDL	Total chol.	RBS	Total
25-34	01	11	40	22	04	97
35-44	03	08	09	10	02	18
45-54	05	08	10	11	06	16
55-64	03	02	02	05	05	05
Total	13	29	61	49	17	136



## Percentage of those affected

Age group	HTN	TGL	LDL	Total chol.	RBS
25-34	1%	11%	41%	23%	4%
35-44	17%	44%	50%	56%	11%
45-54	31.2%	50%	62%	69%	38%
55-64	60%	40%	40%	100%	100%

## Normal values that are used

S. Cholesterol < 200mg/dL

S. LDL. < 100mg/dL

S.HDL. > 40mg/dL

S.triglyceride < 160

RBS. < 140

In this study it was seen that among medical professionals:

9.5% had raised random blood sugar.

32% had raised total cholesterol.

4% had raised LDL cholesterol.

31% had raised S. Triglycerides.

## DISCUSSION:

Atherosclerosis remains the major cause of death and premature disabilities in developed societies. Atherosclerosis affects various regions of circulation preferentially and produces distinct clinical manifestations. Atherosclerosis of the coronary arteries causes myocardial infarction and angina pectoris. Atherosclerosis of the cerebral arteries produces strokes and transient ischemic attacks. In peripheral circulation it produces intermittent claudication and gangrene. It also affects renal arteries.

The study of risk factors for atherosclerosis emerged from multiple studies in humans. The prospective Framingham heart study provided proof for the concept

that hypercholesterolemia, hypertension and other factors such as diabetes mellitus produce cardiovascular risk and are considered as risk factors. The cardiovascular risk factors fall in two categories -those which are modifiable by life style modifications and pharmacotherapy and those which are non modifiable such as age and sex. There are non traditional risk factors such as elevated levels of homocysteine, lipoprotein a and apolipoprotein c3.

Disorders of lipoprotein metabolism are collectively known as dyslipidemias. They are characterized by elevated levels of cholesterol or triglyceride or both and reduced levels of HDL<sup>©</sup>. The majority of patients have combination of genetic predisposition and environmental combination ( life style, medical disease or drugs).

There are many epidemiological datas which shows the relationship between hypertension and atherosclerotic risk factors. Treatment of hypertension reduces the risk of stroke, coronary artery disease and heart failure.

Diabetes mellitus and insulin resistance produces atherosclerosis and its complications. The abnormal lipid profiles associated with insulin resistance known as diabetic dyslipidemia , the LDL particles are smaller and denser and are more atherogenic. They also have low HDL and raised triglyceride levels. Many patients also have rampant obesity which leads to associated hypertension. This clinical cluster of risk factors is also known as metabolic syndrome.

Male sex and postmenopausal females have higher risk.

#### Risk factors of atherosclerosis

- High LDL cholesterol
- Cigarette smoking
- Hypertension ( BP> 140/90 or on antihypertensive medications)
- Low HDL cholesterol
- Diabetes mellitus
- Family history of CHD
- Age (men>45 women > 55)
- Life style risk factors
  - Obesity (BMI>30)
  - Physical inactivity
  - Atherogenic diet
- Emerging risk factors
  - Lipoprotein (a)
  - Prothrombotic factors
  - Pro inflammatory factors
  - Impaired fasting glucose

#### CONCLUSION:

It is disheartening to note that a high % of medical professionals have high risk for coronary atherosclerosis in spite of being well aware of the consequences of dyslipidemia.

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